

### Abstract

A contaminant detection system for mail is provided. A tray of mailpieces is transported along a transport path into a chamber that has a negative pressure maintained by a vacuum system. The tray of mail enters the chamber and is quickly decelerated, such as, for example, by hitting a stop. The quick deceleration compresses the mailpieces in the tray, thereby ejecting air, dust and other particles from the mailpieces into the surrounding environment inside of the chamber. The vacuum system draws the ejected air, dust and other particles into a sampling system that monitors for the presence of a possible biohazard. If any type of contaminant is found in the ejected air, dust and other particles, the tray can be held for further investigation of the mailpieces. If no contaminants are detected, the tray is accepted and the mailpieces are further processed.